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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/810,017 | 03/26/2004 | Yoshiki Kashimura | A01504 | 7725 |

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EXAMINER

QAZI, SABIHA NAIM

ART UNIT PAPER NUMBER

1616

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/810,017 | KASHIMURA ET AL. | |
| | Examiner | Art Unit | |
| | Sabiha Qazi | 1616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Non-Final Office Action

Claims 1-5 are pending. No claim is allowed at this time. Acknowledgement is made of the response filed on 6/30/2006.

Summary of this Office Action

1. Response to Arguments
2. Information Disclosure Statement
3. Copending Applications
4. Specification
5. 35 USC § 103(a) Rejection—1st Rejection
6. 35 USC § 103(a) Rejection—2nd Rejection
7. Communication

Response to Remarks

Arguments were found persuasive therefore previous rejection is withdrawn.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 103—1st Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over SISLER, United States Patent No. 6,194,350 and HUANG et al. Chinese Soc. Hort. Sci, 49(1): 55-62, 2003 (English translation available) in view of ROSSI (US Patent 3,943,987).

SISLER teaches method of applying to the plants an effective ethylene response-inhibiting amount of cyclopropene derivatives or compositions thereof. Further disclosed are methods of inhibiting abscission in plants and methods of prolonging the life of cut flowers. It also discloses that the compound may be applied in gaseous form. See the entire document especially lines 5-36 in column 4. Instant claims differ from the reference in claiming a method under reduced pressure as in claim 1.

SISLER does not teach the transportation under low or reduced pressure.

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HUANG et al. teaches that pre-treatment of flowers with a mixture containing 1-MCP under low pressure resulted in prolongation of vase life of flowers. See the abstract.

ROSSI teaches airtight container for perishable articles, which provides partial vacuum for perishable foodstuffs and other materials requiring an air free environment. See the entire document especially abstract and lines 6-48 in column 1.

It would have been obvious to one skilled in the art to use the method of suppressing the deterioration of the quality of agricultural product by using low-pressure technique to agricultural products because it was shown to be better by the prior art. The reference teaches low pressure enhances the quality. See Table 3, 4, 5 and page 12. Prior art teaches the effect of treatment with TARI's One and 1-MCP of improving quality of *Oncidium* cut flowers subjected to low pressure fumigation to transport. Since ROSSI teaches vacuumed food packages for longer life of perishable foodstuff or where material requiring an air free environment it would have been obvious at the time of invention to use the low pressure technique for longer life of the perishable items such as flowers, fruits etc.

The contact treatment is performed under reduced pressure conditions and preferably performed in an airtight container (See specification of present invention lines 1-10 on page 5).

In absence of any criticality and/or unexpected results instant invention is considered obvious to one skilled in the art at the time of invention.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103—2nd Rejection

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over ZANELLA, A., (DN 138:400727, HCAPLUS, abstract of Post harvest Biology and Technology (2003), Volume date 2002, 27(1), 69-78) and HUANG et al. Chinese Soc. Hort. Sci, 49(1): 55-62, 2003 (English translation available).

The reference teaches the treatment of Apple fruit (*Malus domestica* Borkh.) with 1-methylcyclopropane (1-MCP) at room temperature for 12 h. Quality of fruit stored 4 and 6 months in air, under different controlled

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atmosphere (CA) at low oxygen concentration (1.5, 1.0 and 0.7 Kpa O₂) with initial low oxygen stress (ILOS). The fruits treated with 1-MCP under CA maintained greater firmness and acidity than untreated with 1-MCP. The reference clearly teaches that at low-pressure treatment with 1-MCP has better control of superficial scald and ripening. See the abstract.

Presently claimed invention differs from the reference in claiming a broader scope.

HUANG et al. teaches that pre-treatment of flowers with a mixture containing 1-MCP resulted in prolongation of vase life of flowers. See the abstract.

It would have been obvious to one skilled in the art at the time of invention to use 1-MCP at low pressure for a controlled ripening of fruits as taught by the ZANELLA. HUANG teaches suppressing the deterioration of the quality of agricultural product by using low-pressure technique to agricultural products because it was shown to be better by the prior art. The reference teaches low pressure enhances the quality. See Table 3, 4, 5 and page 12. Prior art teaches the effect of treatment with TARI's One and 1-MCP of improving quality of *Onccidium* cut flowers subjected to low pressure fumigation to transport.

In absence of any criticality and/or unexpected results instant invention is considered obvious to one skilled in the art at the time of invention.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi, Ph.D. whose telephone number is 571-272-0622. The examiner can normally be reached on any business day.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Johann Richter, Ph.D. can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SABIHA QAZI, PH.D
PRIMARY EXAMINER